

SHUTKOVSKIY, N., polkovnik; BODENKOV, P., polkovnik

First steps. Komm. Vooruzh. Sil 4 no. 19:71-75 0 '63.
(MIRA 17:7)

BABKO, A.K.; BODENSKAYA, V.S.

Equilibria in a solution of uranyl carbonate complexes. Zhur.
neorg. khim. 5 no.11:2568-2574 N '60. (MIRA 13:11)
(Uranyl compounds)

BODERSKOVA, N.N.

KARFUSHIN, Mikhail Petrovich; BODERSKOVA, N.N., red.; SHCHEDRINA, N.L.,
tekhn.red.

[Legal relations in socialist labor] Sotsialisticheskoe trudovoe
pravootnoshenie. Moskva, Gos. izd-vo iurid. lit-ry, 1958. 171 p.
(Labor laws and legislation) (MIRA 11:5)

BORISOV, Gennadiy Yakovlevich; GOREVATYY, Leonid Nikolayevich;
BODERSKOVA, N.N., red.; BYKOVA, V.V., tekhn.red.

[Aid to workers and employees for temporary disability;
questions and answers] Posobiia rabochim i sluzhashchim
po vremennoi netrudosposobnosti; v voprosakh i otvetakh.
Moskva, Gos.izd-vo iurid.lit-ry, 1959. 98 p. (MIRA 12:10)
(Insurance, Health)

SHELYUTO, Kseniya Vladimirovna; BOROVSKAYA, Yekaterina Nikiforovna;
BODERSKOVA, N.N., red.; TIMOFEYEVA, N.V., tekhn. red.;
~~VLADIMIRSKAYA, L.S., tekhn. red.~~

[Bonus payments to engineers and technicians according to
Soviet law] Premirovanie inzhenerno-tekhnicheskikh rabotnikov
po sbovetskomu pravu. Moskva, Gos. izd-vo iurid. lit-ry, 1962.
124 p. (MIRA 15:3)

(Engineers--Salaries, pensions, etc.)
(Bonus system)

KARTSEV, Yakov Petrovich; EZERIN, Arnol'd Ernstovich; BODERSKOVA,
N.N. red.; SHCHEDRINA, N.L., tekhn. red.

[Working time and the rest period of railroad transportation workers] Rabochee vremia i vremia otdykha rabotnikov shelezнодорожного транспорта. Moskva, Gosiurizdat, 1963.
99 p. (MIRA 16:8)

(Railroads--Employees)

NESMEYANOV, A.N., akademik; VOL'KENAU, N.A.; BOLESOVA, I.N.

Interaction of ferrocene with substituted aromatic compounds.
Dokl. AN SSSR 166 no.3:607-610 Ja '66.

(MIRA 19:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR. Submitted
July 22, 1965.

BODGAL, Ferenc, muzeologus

Norbert Lippoczy, specialist of Tokaj-Hegyalja. Borsod szemle
6 no.5:46-47 '62.

1. Herman Otto Museum.

BODGAL, Ferenc, muzeologus

"Sheep breeding and dairying in Cserhat, Northern Hungary" by
Zsuzsanna Bene. Reviewed by Ferenc Bodgal. Borsod szemle 6
no.5:109-110 '62.

1. Herman Otto Muzeum.

BODGAL, Ferenc

Significance of forests in the region of the Bukk Mountains.
Borsod szemle 6 no. 1:80 '62.

BODGAL, Ferenc

Gyula Isvanffy, researcher on the the life of the Paloc pepple.
Borsod szemle 7 no.1:46-55 '63.

1. Miskolci Herman Otto Museum etnografusa.

BODGAN, Lazzlo

How can wild geese drink from frozen waters? Aquila 69/60:
268 '62-'63 [publ. '64].

BODGANOV, V.

Changes in the structure and characteristics of bean growth
after the dusting with Paration and Ekatin. Izv Inst zasht
rast 5:181-191 '63.

FEDORENKO, G.Ya. [Fedorenko, H.IA.]; KAPUSTYAK, S.M.; GNIDETS', I.R.
[Hnidets', I.R.]; BODGANOVA, N.L. [Bohdanova, N.L.]

Use of bactericidal lamps in the pharmacy practice. Farmatsev.
zhur. 16 no.4:11-14 '61. (MIRA 17:6)

1. Kafedra tekhnologii lekarstv (zaveduyushchiy kafedroy dotsent
Yu.O. Karpenko), kafedra mikrobiologii (zaveduyushchiy kafedroy
dotsent M.M. Muzyka) L'vovskogo meditsinskogo instituta i Apteka
No.1 g. L'vova (upravlyayushchaya N.L. Bogdanova [Bohdanova, N.L.]).

URSU, I.; BODI, A.; POPESCU, D.

Aspect of the electronic spin resonance in the Pt-C system.
Comunicarile AR 13 no.9:793-798 S'63

1. Membru corespondent al Academiei R.P.R. (for Ursu).

Leaf A

CA

17

PROCESSING AND PROPERTY NOTES

Determination of the value of domestic (Hungarian) drugs containing ethereal oil. Anna Dohi (Univ. Buda-pest). *Bor. ungar. pharm. Ges.* 19, 515-20 (1913); *Chem. Zentr.* 1904, II, 244. — The content in ethereal oil of the following drugs was detd. by the method of Unger as modified by Kise: *Sassa Absinthii*, fruct. *Anisi vulg.*, rhizoma *Calami*, fruct. *Carvi*, *Ses Chomomillae*, fruct. *Coriandri*, fruct. *Foeniculi*, fruct. *Juniperi*, fol. *Menthas pip.*, fol. *Salviae*, *basin Thym.*, radix *Valerianae*, and cortex *Aurantii*. On the basis of detas. made on several drugs after storage for 1 year, it is recommended that drugs contg. ethereal oils be stored in a cool, dry place in glass or porcelain containers protected from the light. M. G. M.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

SECONDARY ONLY ONE

EXPLANATION

TERMINOLOGY

SECONDARY ONLY ONE

BODI, A.

"Immune biology of guinea pigs acclimated to cold. I. Complement titer and bactericidal properties." In English, p. 131.

ACTA BIOLOGICA. (Magyar Tudományos Akadémia) Budapest, Hungary, Vol. 9, No. 2, 1958.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, No. 6, June 1959.

Uncl.

BODI, A.; AND OTHERS

Immune biology of guinea pigs acclimated to cold. II. Phagocytosis. p. 265

ACTA BIOLOGICA. (Magyar Tudományos Akademia) Budapest, Hungary. Vol. 9, No. 3, 1959

Monthly List of East European Accessions, (EEAI)LO. Vol. 9, No. 1, Jan. 1960

Uncl

BODI, A. (Rumynskaya Narodnaya Respublika)

Effect of the internal resistance of a rectangular pulse
source on the performance of a voltage generator. Izv.tekh.
no.12:33-36 D '62. (MIRA 15:12)
(Pulse techniques (Electronics))

I. 2861-66

ACCESSION NR: AP5026370

RU/0011/65/009/002/0049/0052

AUTHOR: Bodi, A. (Engineer)

TITLE: Utilization of the pn-junction capacity for the tridimensional visualization of the resonance curves of coupled circuits on the oscillograph

SOURCE: Automatica si electronica, v. 9, no. 2, 1965, 49-52

TOPIC TAGS: coupling circuit, automatic control system, pn junction, oscillograph

ABSTRACT: The author describes an experimental installation for the tridimensional visualization of the resonance curves of coupled circuits, and suggests an appropriate electronic regulating system to regulate the coupling. Orig. art. has 6 figures and 1 graph.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 006

OTHER: 014

JPRS

Card 1/1

SZEMERE, Gyorgy (Szeged, Gogoly-u 6., Hungary); BODI, Arpad (Szeged, Mikszath Kalman u.4., Hungary); CSIK, Lajos (Szeged, Juhasz Gyula u.5a, Hungary)

Immune biology of guinea pigs acclimated to cold. III. Inheritance of natural immunity. Acta biol Hung 10 no.3/4:363-371 '60. (EBAI 9:12)

1. Institut of Biology, Medical University of Szeged (Head: L.Csik)
(IMMUNITY)

BODI, Alexandru

Producing tension in stages for automatic increase of
characteristic curves by cathodic oscillograph. Studia
Univ B-B S. Math-Phys 9 no.2:125-131 '64.

~~BODI, Alexandru~~; LASZLO, T., prof. dr.; IONESCU, T.V., prof. dr. (Bucuresti);
CISMAN, A., prof. dr. (Timisoara); PETRESCU, D., prof. dr. (Iasi)

Contribution to the study and use of rectangular tension in
the technology of measurements. Studia Univ B-B S. Math. Phys
9 no.2:139-140 '64.

1. "Babes-Bolyai" University, Cluj (for Laszlo). 2. Corresponding
Member of the Rumanian Academy (for Ionescu, Cisman).

BODI, A.; CIOARA, P.

Determination of nonpair electron concentration by the absolute way with the spectrometer of spin electronic resonance. Studii cerc fiz 15 no.4:385-388 '64.

1. The "Babes-Bolyai" University, Cluj.

KLUG, Otto; SAJO, Istvanne, dr.; BODI D., okleveles kohomernok; SARKADY,
S. -ne, technikus;

Flame photometric analyses in magnesium metallurgy. Koh
lap 96 no.11:519-521 N'63.

1. Femipari Kutato Intezet, Budapest.

BODI, Dezsó

Processing lead-copper matte. Koh lap 95 no.6:264-268 Je
'62.

1. Femipari Kutató Intézet tudományos munkatársa.

Distr: 4E2c(j)/4E3b/4E3d

/467/80.

878.074.017

Determination of unsaturated linkages in unsaturated polyesters. K. Gréger, I. Szmerossányi, E. Bádi. Magyar Kémikusok Lapja, Vol. 16, 1960, No. 2, pp. 72-74, 3 figs., 3 tabs.

The unsaturated component of unsaturated polyesters is maleic or fumaric acid. Determination of the ethylene linkages may take place by the decomposition and hydrolysis of the polyester. The purpose of the present investigation was to find a suitable method of saponification, a way of determining the ethylene linkages by bromine chloride standard solution and analyzing maleic and fumaric acids by means of polarography. The saponification of the polyester resin was carried out at room temperature by a 20% excess of 0.5-N NaOH; then the excess alkali was titrated in the presence of phenolphthalein indicator with 0.5-N HCl. The neutral solution was evaporated to dryness in a dish and the residue dissolved in distilled water; this solution was used for the determination of the double bonds. It is known that the bromate and bromide ions react in the presence of hydrochloric acid quantitatively to give bromine chloride: $\text{BrO}_3^- + 2\text{Br}^- + 3\text{Cl}^- + 6\text{H}^+ = 3\text{BrCl} + 3\text{H}_2\text{O}$ which can be added to unsaturated organic compounds. A bromine chloride solution was used for determining the number of the double bonds also in saponified unsaturated polyesters. The maleate and fumarate contents of unsaturated polyester condensates were analyzed by polarography proving that the number of double bonds was in good agreement with the results of the bromine chloride addition.

4
1-BW(BW)
07-kgf (NB) (May)
3

FODI, GY.

FODI, GY. New planning method for installation and supply enterprises. p. 16
Vol. 4, no. 6, June 1956. VILLAMOSSAG. (Magyar Elektrotechnikai
Egyesulet)

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

BODI, Gyula okl, villamosmernok; LAPOSVARI, Kalman okl, villamosmernok

Problems of technical development for the heavy current industry on the basis of the requirements of industrial branches which use its products. Villamosag 9 no.1/3:46-53. Ja-Mr '61

1. A Koho-es Gepipari Miniszterium Erosaramu Berendezesi Igazgatosa-ganak vezetoje (for Bodi).
2. A Koho-es Gepipari Miniszterium Erosaramu Berendezesi Igazgatosa-ganak iparagi fomerneke (for Kaposvari).

BODI, Gyula, okl.villamosmernok

Establishment of plants in the country and its results in
the heavy current industry. Villamosag 9 no.12:354-356
D '61.

1. A Koho- es Gepipari Miniszterium Erosaramu Berendezesi
Igazgatosaganak vezetoje.

BODI, Gyula, okl.villamosmérnök; KAPOSVARI, Kalman, okl.villamosmérnök:

Problems of technical development for the heavy current industry on the basis of the requirements of industrial branches which use its products. Villamossag 9 no.1/3:46-53 Ja-Mr '61.

1. A Koho-es Gepipari Miniszterium Erosaramu Berendezesi Igazgatosaganak vezetője (for Bodi). 2. A Koho- es Gepipari Miniszterium Erosaramu Berendezesi Igazgatosaganak iparagi fomerneke (for Kaposvari).

BODI, Gyula

Institute for the Development of the Heavy-Current Products.
Elektrotechnika 53 no.9:421-422 *60

1. Iparigazgato, Erosaramu Gyartmanyfejlesztési Intezet veze-
toje.

CSEGO, Janos; URBANEK, Janos, dr., a muszaki tudomanyok doktora, Kossuth-
díjas; LUKACS, Jozsef, dr., a muszaki tudomanyok kandidatusa;
BODI, Gyula.

The 10-year-old Research Institute of the Electric Industry.
Elektrotechnika 53 no.8:362-367 '69

1. Koho- es gepipari miniszter (for Csergo). 2. Villamosipari
Kutato Intezet igazgatoja; "Elektrotechnika" szerkeszto bizottsagi
tagja (for Urbanek). 3. Villamosipari Kutato Intezet folvezeto
laboratoriumanak vezetoje (for Lukacs). 4. Errosaramu Berendezesi
Igazgatóság vezetoje, iparigazgato (for Bodi).

RUMANIA/Cultivated Plants - Fruits. Berries.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82483
Author : Bordeianu, T., Bodi, I., Modoran, I., Tudosescu, O.
Inst : Research Institute of Agriculture
Title : Shortening of the Process of Obtaining Planting Material
of the Fruit Trees.
Orig Pub : An. Inst. cercetari agron., 1957, 24, No 5, 395-405
Abstract : As the result of experiments carried at the experimental
stations Bistritsa and Voyneshti (1952-1955), it follows
that with the direct planting of the wild apple tree
seeds in the first field of the nursery and the thinning
out of the seedlings (distance 100 x 40 centimeters) it
is possible to obtain in the year of planting, in the
first field, material suitable for grafting. With the
winter grafting on the table of one-year old seedlings

Card 1/2

BECHESCU, M. [Bacescu, M.]; GOMQII, M. T. [Gomoiu, I. T.]; BODIANU,
N. [Bodeanu, N.]; PEIRONI, Mariana; MIULEA, G. [Miuller, G.]
MANIA, V. [Manea, V.]

Ecologic investigations of the Black Sea. Rev biol 7
no. 4: 561-582 '62.

BODI, Katalin

Yearly savings: 120 thousand forints. Magy vasut 7 no.24:
3 14 D'63.

ECI, L.

ECI, L. Heine and classic German philosophy. p. 37.

Vol. 115, No. 1, Jan. 1956

TERMEZET ES TARSADALOM

SCIENCE

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

LASZLO, Tihamer, (Cluj, Rumania); BODI, Sandor, (Cluj, Rumania)

TV-DX at Cluj. Radiotechnika 10 no.5:147 My '60

BODI, Sander

Application of square-wave generators for the demonstration of phenomena occurring in switchin off and on the condenser coil circuit. Fiz. szemle 8 no.8:259 0 '58.

1. Belyai Tudományegyetem Elektromosságtan-Optika Tanszék, Kéz-
lezsvár.

BODI, Sander

Step voltage production by square-wave generators for the oscillographic measurement of characteristic curves depending upon electrical parameters. Hie techn 13 no.3:107-111 Je '62.

1. Babes-Bolyai Tudomanyegyetem, Cluj, Rumania.

BODIAGIN, Mikhail Nikolayevich, kand. tekhn. nauk. Prinsipal uchastiye
KULIKOV, G.S., inzh.; BOYKO, A.A., otv. red.; OKHRIMENKO, V.A.,
red. izd-va; PROZOROVSKAYA, V.L., tekhn. red.

[Mine ventilation] Provetriivanie shakht. Moskva, Gos.nauchno-
tekhn.izd-vo lit-ry po gornomu delu, 1961. 230 p. (MIRA 15:1)
(Mine ventilation)

BODIAZHINA, V.I.; KIRYUSHCHENKOV, A.P.

Some data on the passage of mercamine- S^{35} through the placenta
and on its distribution in maternal and fetal organs. Med.rad.
5 no.2:58-62 F '60. (MIRA 13:12)

(ETHYLAMINE)

(PLACENTA)

SIMIC, B.S.; BODICEVIC, J.; ATANACKOVIC, V.; DJIVANIVIC, B.; JEVTIC, S.;
MARINKOVIC, M.; BAKIC, V.; RASIC, M.; MANDIC, M.; Statisticka
spoluprace: TODOROVIC, P.

Effect of vitamin and trace element supplements on the health
and work productivity of workers in the steel industry. Cesk.
gastroent. vyz. 19 no.5:282-289 J1 '65.

1. Federativni ustav verejného zdravotníctvi a Ustav hygieny
lekarske fakulty university v Belehrade.

BODICKY, V., inz.

The BJH-2022 crane truck. Tech prace 14 no.12:996-997 D '62.

1. Mechanizačný a regeneračný podnik, Bratislava.

1ST AND 2ND SHEETS		3RD AND 4TH SHEETS	
PROCESSING AND PROPERTY INDEX		10	
Reaction between aromatic diamines and dicarbonylic acids. VI. Reaction of tolidine and diaminidine with phthalic anhydride. B. A. Poval-Kochits and D. A. Rodik (Dyestuff Lab. LKHTI (Moscow)). <i>J. Chem. Chem. (U.S.S.R.)</i> 15, 248-51 (1948) (English summary); cf. <i>C.A.</i> 39, 4599¹.—It was shown that <i>o</i>-tolidine or <i>o</i>-diaminidine condenses with 1 mol. phthalic anhydride (I) to yield monophthaloyl derivs. without formation of "H"-bonds between N and O atoms. Thus, the Kramer formula with bipolar structure of these compds. is disproved. Neither monophthaloyl deriv. is capable of dehydration to form a substance analogous to Gellman's "imideamide" (<i>Gen. chim. Ital.</i>, 24, 1145 (1939)). Both derivs. form dipthaloyl derivs. on further reaction with I. <i>o</i>-Tolidine (30 g.) was treated in the molten state at 200° with 4 g. I with stirring, and heated for 1 hr. to 220-30°. The cooled melt was ground and heated with 800 cc. 10% HCl and filtered; the residual monophthaloyl-<i>o</i>-tolidine-HCl (II) was suspended in dil. HCl, diazotized with NaNO₂, and coupled with alk. soln. of 2-naphthol to yield a bright red deriv. The yield of II was 6 g., m. 230°. Treatment with 10% Na₂CO₃ at 80° gave the free base, m. 210-12° (from EtOH). The base, heated with PhNMe₂ at reflux for 3 days, failed to change or to form a cyclic deriv. I (20 g.) was treated in molten state with 2 g. <i>o</i>-tolidine over 10-15 min. at 100-80°, heated to 180° for 0.5 hr., cooled, and ground with hot Na₂CO₃ soln. to yield 93% diphaloyl-<i>o</i>-tolidine as a yellowish residue, m. 334° (from AcOH). The compound could not be diazotized, while heating with an excess of <i>o</i>-tolidine at 170-200° for 1 hr. gave good yields of II. II (free base) heated with excess I to 170° gave good yields of the dipthaloyl deriv. <i>o</i>-Diaminidine (20 g.) was treated with 4 g. I at 200° and heated then for 1 hr. to yield 47% monophthaloyl-<i>o</i>-diaminidine, m. 308-10°, which was readily diazotizable; it failed to cyclize on prolonged heating with PhNMe₂, pyridine, PhNO₂, or alone. <i>o</i>-Diaminidine (2 g.) was added to 30 g. I at 170° and heated for 0.5 hr. to yield 92% diphaloyl-<i>o</i>-diaminidine, m. 338° (from PhNO₂). G. M. Kosolapoff			
A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION			
FROM SYNONYMS		FROM SOURCE	
SYNONYMS		SYNONYMS	
SYNONYMS		SYNONYMS	

TISHKOVICH, A.V., kandidat tekhnicheskikh nauk; BODILOVSKIY, V.A., kandidat tekhnicheskikh nauk.

Exploring peat deposits in order to procure peat for use as
fertilizer and the preparation of bogs for winning peat. Trudy
Inst.torf.AN BSSR 5:7-31 '56. (MLRA 9:12)
(Peat bogs) (Fertilizers and manures)

BODILOVSKIY, V. A.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,
p 253 (USSR) 15-57-7-10367

AUTHORS: Bodilovskiy, V. A., Malyshev, F. A., Anuchkin, M. V.

TITLE: Preparation of Peat for Soil Conditioning With the
Help of the UMPF-4 Peat Loader (Zagotovka torfa na
udobreniye s primeneniym mashiny UMPF-4 i uchet torfa)

PERIODICAL: Tr. In-ta torfa AN BSSR, 1956, Vol 5, pp 32-46

ABSTRACT: The present article describes tests of the UMPF-4
peat loader conducted in 1951 in one of the peat bogs
of the Minsk district. The tests were conducted by
the Peat Institute of the Academy of Sciences of the
Belorussian SSR in collaboration with the "DUKORA"
Peat Experiment Station. The machine was tested for
loading peat to be used as fertilizer, that is, peat
with a moisture content of 60 percent. The peat
deposit on which the tests were made is described.

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Preparation of Peat for Soil Conditioning (Cont.) 15-57-7-10367

The peat was treated as follows before loading: The peat bog was prepared for plowing; it was then plowed to a depth of 250 mm to 350 mm by means of a PKB-56 swamp plow and other plows coupled to an STZ-NATI or DT-54 tractor. The upper layer of the deposit was broken by LBD-4 and LBD-5 harrows, "zigzag" harrows, and blade-type cultivators coupled to SKhTZ-NATI or DT-54 tractors. The peat was dried to a moisture content of 45 to 60 percent. It was then rolled by a 4-section VTU peat roller designed by the Peat Institute of the Academy of Sciences of the Belorussian SSR. The rolled peat was next loaded and hauled to the fields. The design and properties of the VTU roller are described. The production of the VTU roller coupled to a DT-54 tractor operating in third gear for 8 hours of peat rolling amounted to 34 hectares. The UMPF-4 peat loader was used to load the rolled peat. The design and properties of the loader are described. Graphs of the work cycle should be prepared for proper coordination of the complex operations involved in obtaining peat. Three types of such graphs are presented. The Card 2/4

Preparation of Peat for Soil Conditioning (Cont.) 15-57-7-10367

capacity of the UMPF-4 peat loader per 8 hours of peat loading is 4 to 5 hectares; the average amount of peat loaded (with 60 percent moisture content) is 50 tons per hectare. The cost per ton of loading and hauling the peat is 2 to 2.5 rubles for a hauling over a distance of 150 m to 200 m. This loader will require the following modifications for wider use: 1) the undercarriage will need to be strengthened; 2) the load capacity will need to be reduced from 12 cu m to 9 or 10 cu m; 3) the manner of unloading the peat onto trucks or other conveyances will need to be modified, or the height of unloading into piles will need to be adjusted to from 2 m to 215 m. Properties and production of the various machines used in conjunction with the UMPF-4 loader are given. The amount of peat loaded is calculated after it has been brought into storage. Where peat is produced with the help of farming machinery MTS, the author recommends that a running account and a final inventory be taken. The former is necessary for keeping track of time spent by workers occupied in this operation and for planning the time of year when

Card 3/4

Preparation of Peat for Soil Conditioning (Cont.) 15-57-7-10367

the operation should be conducted. After completing the operation in a given area of a peat bog, an inventory should be taken by a specially selected committee.

Card 4/4

A.A. Kostin

BODILOVSKIY, V.G.; RANSKIY, Ye.G., inzh., retsenzent; USTINSKIY,
A.A., kand. tekhn. nauk, retsenzent; NOVIKAS, M.N.,
inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Vacuum devices and transistors in automatic control, remote control, and communication systems] Elektrovakuumnye i poluprovodnikovye pribory v ustroistvakh avtomatiki, telemekhaniki i svyazi. Moskva, Transzheldorizdat, 1963. 391 p.
(MIRA 17:2)

USTINSKIY, Aleksandr Andreyevich, kand. tekhn. nauk; BODILOVSKIY,
Vasiliy Georgiyevich, inzh.; ROZENBERG, N.M., inzh.,
retsenzent; SOKOLOV, V.F., inzh., retsenzent; NOVIKAS, M.N.,
inzh., red.; KHITROCA, N.A., tekhn. red.

[Radio-relay communication in railroad transportation] Radio-
releinaia sviaz' na zheleznodorozhnom transporte. Moskva,
Transzheldorizdat, 1962. 330 p. (MIRA 15:6)

(Railroads--Communication systems)

(Radio relay systems)

BODIN, A., inzh.

We increase the rate of electrification. Sel'. stroi. no. 6:15-16
Je '62. (Ivanovo Province—Rural electrification) (MIRA 15:7)

BODIN, A., inzh.

New suggestions for improving the utilization of construction
equipment for electric transmission lines. Sel'. stroi. 16
no.1:19-20 Ja '62. (MIRA 16:1)
(Rural electrification) (Construction equipment)

BODIN, A., inzh.

Assembly of rural transformer substations. Sel'. stroi. 17
no.4:22-23 Ap '63. (MIRA 16:7)

(Electric substations—Design and construction)

SHATS, Ye.L.; BODIN, A.P.; KOROVIN, M.A., red.; SAYTANIDI, L.D., tekhn.
red.

[Safety engineering in rural electric power systems; electrician's
manual] Tekhnika bezopasnosti v sel'skikh elektroustanovkakh; pa-
miatka elektromontera. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961.
39 p. (MIRA 14:11)
(Rural electrification--Safety measures)

BODIN, Aleksandr Platonovich; ROGACHEV, Il'ya Fedorovich; KHAVICH, Yefim
~~Abramovich~~; ZELENETSKAYA, L.V., red.; SATTANIDI, L.D., tekhn.
red.

[Organization of the installation of electric equipment in rural
electric power systems] Organizatsiia elektromontazhnykh rabot na
sel'skikh elektroustanovkakh; spravocnoe rukovodstvo. Moskva,
Izd-vo M-va sel'.khoz.RSFSR, 1961. 210 p. (MIRA 14:12)
(Rural electrification)
(Electric power distribution--Equipment and supplies)

BUDZKO, Igor' Aleksandrovich; BODIN, Aleksandr Platonovich; ZUL',
Nikolay Mikhaylovich; POYARKOV, Kirill Mikhaylovich;
YAKOBS, Aleksey Ivanovich; ZELENETSKAYA, L.V., red.;
SAYTANIDI, L.D., tekhn. red.

[Calculation of rural electric power distribution networks
with voltage regulation] Raschet sel'skikh elektricheskikh
setei s regulirovaniem napriazhenia. [By] I.A. Budzko i dr.
Moskva, MSKh RSFSR, 1963. 168 p. (MIRA 16:10)
(Electric power distribution)

BODIN, Aleksandr Platonovich; KHAVICH, Yefim Abramovich;
ZELENETSKAYA, L.V., red.

[Organization of the construction and operation of
electrical systems on collective and state farms] Orga-
nizatsiia montazha i ekspluatatsii elektroustanovok v
kolkhozakh i sovkhozakh. Moskva, Rossel'khozizdat, 1965.
238 p.
(MIRA 18:7)

29475
R/002/61/000/011/001/004
D015/D105

21.1000

AUTHOR: Bodin, C., Engineer

TITLE: The atomic industry. A new branch

PERIODICAL: Știință și Tehnică, no. 11, 1961, 2 - 5

TEXT: The article deals with new Soviet nuclear power plants and various experimental nuclear power plants, built for research purposes. Two new power plants are under construction in Beloyarsk and Novo-Voronezh. The 600,000-kw Beloyarsk nuclear power plant will be equipped with uranium-graphite reactors, and will consist of six 100,000-kw units. A charge of 90 t of uranium will operate the plant over a period of 750 days. The steam will be heated directly in the reactor and will attain, after being recycled, a temperature of 510°C. The two reactors of the 450,000-kw power plant in Novo-Voronexh use uranium enriched up to 1.5% with uranium dioxide. Water is used as a moderator and coolant. The active zone of the reactor is 2.5 m high and 3 m in diameter. The two reactors will operate 1½ years without interruption. The water is pumped at a pressure of 100 atm and a temperature of 250°C. Saturated steam at a

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The atomic industry. A new branch

29475

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D015/D105

pressure of 32 atm is generated by the steam generator. Each reactor drives three 70,000-kw turbines. The USSR is also building 10 different types of experimental atomic power plants. One of these, of 70,000 kw, uses a water-boiler reactor in which the liquid is converted into vapor by immersing the uranium or plutonium bars in the liquid, and utilizes water as moderator and coolant. The saturated steam is fed directly to the turbine at a pressure of 29 atm. Another experimental atomic power plant of 50,000 kw, has a thermal reactor with graphite as moderator and sodium as coolant. A third type of experimental power plant has a homogeneous reactor with thorium-232 as moderator and heavy water as coolant. According to A.I. Leypunskiy, the USSR has constructed a reactor using fast neutrons, which transforms uranium-238 and thorium-232 into plutonium and uranium-233, respectively. This reactor is equipped with three circuits instead of two for discharging the heat. The primary circuit uses liquid sodium, the second sodium mixed with potassium or pure sodium and the third, water at 420°C and a pressure of 32 atm. Two fast neutron reactors, one for a 50,000-kw and the other for a 250,000-kw power plant, are being designed in the USSR. In 1960, the total power of nuclear power plants in operation or under construction attained 2.5 million kw. There are 5 figures.

Card 2/2

X

PHASE I BOOK EXPLOITATION

JUN 25 1963
SOV/6218

Bodin, Constantin, Major, Engineer

Radiațiile infraroșii în tehnica militară (Infrared Radiation in Military Applications). [Bucharest] Editura militară [1962] 175.p. 534 copies printed.

Resp. Ed.: D. Dimitriu, Major, Engineer; Tech. Ed.: D. Andrei.

PURPOSE: This booklet presents some ideas about the method of operation and the applicability in military situations of infrared radiation instruments.

COVERAGE: The four main chapters of this work refer to the properties of infrared radiation, sources used for generating them, devices detecting the presence of infrared radiation, and devices and instruments with infrared radiation used in military technics. There are 73 illustrations and 30 references, of which 25 are Soviet.

Card 1/4

R/002/62/000/008/001/003
D272/D308

AUTHOR: Bodin, Constantin, Engineer

TITLE: Infrared optics

PERIODICAL: Știința și tehnica, ¹⁴⁻no. 8, 1962, 12 - 14

TEXT: The characteristics of infrared radiation are briefly described, indicating the advantages of their application. A detector of infrared radiation (electron-optic transformer) is described based on focussing of the infrared radiation, emitted by a reflecting body, onto a photocathode, the liberated electrons being accelerated towards the anode (a luminescent screen) by a high voltage. Its possible incorporation in various optical detection instruments, like binoculars, telescopes, periscopes and target-seeking mechanisms in rockets, is reviewed, in conjunction with the necessary infrared radiation sources. The evaporograph, enabling vision as well as photographing of infrared radiation emitted by various bodies at close-to-room temperature is described. It is based on focussing of the infrared image onto the lamp-black coated surface of a celluloid film, contained in a vacuum chamber, the outer surface

Card 1/2

Infrared optics

R/002/62/000/008/001/003
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being coated with a camphor oil layer; the oil vaporizes from the hotter sites and condenses in the colder sites, the picture thus obtained being illuminated by a light source and then seen or photographed by means of a special optical setup. Applications of the evaporo-graph are mentioned. There are 6 figures. ✓

Card 2/2

BODIN, Constantin, ing.

Quantio phenomena in fluid helium. St si Teh Buc 15 no.1:16-17
Ja '63

TAUTH, Teodor, ing. fiz.; BODIN, Constantin, ing.

~~Source of information on the activities of the~~
Laser, an inexhaustible source of applications. St si Teh Buc
17 no.2:12-14, 45 F '65.

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSING AND PROPERTY INDEX																																																			
ca 21 Rapid determination of combustible sulfur in solid fuels rich in sulfur. M. A. Bodin. <i>Zashchita Lab.</i> 6, 633-3 (1937).—In the usual combustion analysis with O_2, the SO_2 is absorbed in the oxidizing mixt. of satd. $KClO_3$ soln, contg. 7% $NaNO_3$. Chas. Blanc																																																			
COMMON ELEMENTS MATERIALS INDEX ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION 1930-1939 1940-1949 1950-1959 1960-1969 1970-1979 1980-1989 1990-1999																																																			

1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									
PROCEDURES AND PROPERTIES INDEX																			
<i>at</i> <i>at</i> Volumetric and potentiometric determination of hydrogen peroxide and persulphuric acids present together. M. A. Bonin. (Zaved. Lab., 1938, 7, 1248-1250).—H₂SO₄ is added to 10 ml. of the solution, to 2N., and H₂O₂ is titrated with KMnO₄. 2-3 drops of 1 in EtOH are added, and the solution is titrated with 0.1N-Na₂S₂O₄ (1 ml. = 4.563 mg. H₂SO₄). 10 ml. of a special solution (10 g. of KI are added to 20 ml. of 5% CaSO₄, the I liberated is titrated with Na₂S₂O₄, and 25 g. of KCl are added, followed by H₂O to 100 ml.) are now added, and the solution is titrated with 0.1N-Na₂S₂O₄ (1 ml. = 11.42 mg. H₂S₂O₈). R. T.																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND COLUMNS										3RD AND 4TH COLUMNS									

ca

PROCESSES AND PROPERTIES

New method of determining iron with ferrocyanide solution. M. A. Budin, *Zavodskaya Lab.* 8, 32-3 (1950).—A mixt. of 10 ml. isomyl alc., 5 ml. of 10% NH_4CNS soln., and 100 ml. of a soln. contg. not less than 3 mg. of ferric ions is shaken in a closed 250-ml. tube until the ring of isomyl alc. becomes dark-cherry in color. Titration is started with 1 ml. of $\text{K}_3\text{Fe}(\text{CN})_6$ and continued with decreasing amt., until 0.1 ml. is used before the end. The titration is finished when the alc. is colorless and transparent. A parallel detn. is carried out. The amt. of Fe in 1 l. is calcd. from: $V \cdot T(10) = \text{mg. Fe/l.}$ where V is ml. of cyanide soln. used and T is the empirical titer for Fe. The detn. lasts 4-5 min. Differences between actual and calcul. values of Fe in samples contg. 20-200 mg. Fe per l. min. ranged up to 5%.

H. Z. Karnich

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS		PROCEDURES AND PROPERTIES INDEX		COMMON VALUABLE INDEX	
CA		2 Homogenization of binary layering by a third component. 1. L. Krupatkin and M. A. Bordin. <i>J. Gen. Chem.</i> (U.S.S.R.) 17, 1993-6 (1947) (in Russian).—(1) In the binary system (iso-Pr)₂O-H₂O, mutual soly. is slight and varies little with the temp.; at 30, 35 and 60°, soly. of (iso-Pr)₂O in H₂O is 0.9, 0.7, and 0.7%, that of H₂O in (iso-Pr)₂O, 0.4, 1.0, and 1.0%. By extrapolation, it is concluded that the system has no lower, but does have an upper, crit. point. (2) The 30° and 60° isotherms of the ternary system (iso-Pr)₂O-H₂O-iso-PrOH lie very close to each other. iso-PrOH is an efficient homogenizer of (iso-Pr)₂O-H₂O mixts.; the max. amt. necessary for complete homogenization is about 45%. In terms of temp., mutual soly. increases with rising temp. from (iso-Pr)₂O to a point A, (iso-Pr)₂O 37.0, iso-PrOH 42.0, H₂O 21.0%; this is reversed between A and a point B 6.4, 36.8, 53.8%, again reversed between B and C, 1.2, 13.5, 85.0%, and once more between C and H₂O, i.e., along the last portion soly. at 30° is slightly higher than at 60°; thus, between B and C, the temp. dependence of the soly. of (iso-Pr)₂O in H₂O in the presence of iso-PrOH is reversed as compared with the binary system. But for that portion, the given ternary system is illustrative of the case of intersection of binodals. At 30°, azeotropic upper and lower layers have the compns. (iso-PrOH, (iso-Pr)₂O, H₂O): 23, 35, 7 and 35, 6, 59%; 13, 76, 6 and 24, 2, 74%; 7, 90, 3 and 13, 1, 86%. By the tangent to the binodal curve drawn from the point of intersection of the tie-lines, the ternary crit. point lies at 43, 33.5, 23.5%, i.e. is shifted to the (iso-Pr)₂O-iso-PrOH side. N. Thon			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION					
FROM 1771621216		TO 1771621216		FROM 1771621216	
SECTION 1		SECTION 2		SECTION 3	
SECTION 4		SECTION 5		SECTION 6	

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ACCESSION NR: AT5018587

tical expectation and moments of second order of the rounding error and the total error are derived. A formula is given for the expansion of the distribution density function of the rounding error according to orthogonal Hermitian polynomials, exhibiting the correlative dependence between the coordinates of the vector. Asymptotic formulas and estimates are given to demonstrate the effect of rounding-off errors on the results of measurements. Orig. art. has: 190 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MA, DP

NO REF SOV: 007

OTHER: 004

Card 2/2

BODIN, S. (g. Kishinev)

Restoration of storage batteries. Radio no.10:39 0 '61.

(MIRA 14:10)

(Storage batteries)

BODINA, I. Ye.

Ostracods from Tertiary deposits of the Zaysan and Ili Depressions.

Trudy VNIGRI no. 170:43-167 '61. (MIRA 14:10)

(Zaysan Lake region--Ostracoda, Fossil)

(Ili Valley--Ostracoda, Fossil)

BODINOVSKIY, D.Sh.

BODINOVSKIY, D.Sh, kandidat meditsinskikh nauk

A case of platyspondylia. Ortop.travm. i protez. no.2:78 Mr-Apr
'55. (MLRA 8:10)

1. Iz rentgenovskogo otdeleniya Poltavskoy oblastnoy bol'nitsy
(glavnyy vrach--V.Kh.Shiray)
(SPINE, diseases
platyspondylisis)

ROTT, L.; BODIS, A.; BOER, C.; SZUCS, E.

Water supply from small installations using water from
mountain creeks. Meteorologia hidrol gosp 5 no.4:267-272
'60.

BODIS I

SZANTO, Imre; BODIS, Istvan

Problems of congenital familial methemoglobinemia, based on a personal case. Orv. hetil. 95 no.35:946-950 29 Aug 54.

1. A Budapesti Orvostudományi Egyetem Sebészeti Anatómiai és
Műtettani Intézetének (igazgató: nagy Dénes dr. egyetemi docens)
és Mikrobiológiai Intézetének (igazgató: Alföldy Zoltán dr. egyet.
tanár, az orvosi tudományok kandidátusa) közleménye
(METHEMOGLOBINEMIA
congen. familial)

BODIS, L.

SAS, M.; KOVACS, I.; BODIS, L.; KENYERMB, F.

~~XXXXXXXXXX~~
Effect of thiouracil on pregnancy in animals. Magyar. orv.
lap. 14 no.7:205-208 July 1951. (CML 20:11)

1. Doctors. 2. Obstetric and Gynecological Clinic, Szeged
University.

✓ Determination of adenosine triphosphate in toxemia of late pregnancy. L. Bódis, G. Pálkó, and I. Piukovich. *Magyar Néprorvosok Lapja* 18, 185-7(1953); *Excerpta Med.*, Sect. 2, 7, 0-10(1954).--In normal pregnancy and delivery the adenosine triphosphate (ATP) level of the blood is slightly elevated. In toxemia of late pregnancy and pre-eclampsia the value decreases in accordance with the degree of toxemia. Before and after a convulsion the level remains unchanged. Since the dilatating capacity of the arterioles is determined by the ATP contents of their smooth-muscle cells, this observation seems to support the theory that toxemia of late pregnancy is caused by vascular spasm. A. M. M.

FEKETE, G.;BODIS, L.

Contribution to the problem of moderate routine executed toxicological tests. Orv. hetil. 94 no.22:602-604 31 May 1953. (GLML 25:1)

1. Doctor for Fekete and Bodis; Technical collaborator for Makk. 2. Institute of Pathophysiology (Director -- Prof. Istvan Karady) and Women's Clinic (Director -- Prof. Janos Batisfalvy), Szeged Medical University.

8448

ANTAL, Albert, dr.; BODIS, Lajos, dr.

A rare case of embryonic mesenchymoma. Magy. onkol. 7 no.3:
164-168 5'63.

1. Szegedi Varosi Tanacs Korhaza, Szuleszeti es Nagygyaszati
Osztaly.

(INFANT, PREMATURE, DISEASES) (MESENCHYMOA)
(PATHOLOGY)

BODIS, Lajos, dr.; ANTAL, Albert, dr.

Treatment of cystic and suppurative diseases of Bartholin's gland by marsupialization. Orv.Hetil.105 no.22:1029-1031
My 31 '64.

1. Szegedi mj. Varosi Tanacs Korhaz, Szuleszeti es Noggyasztati
Osztaly.

BODIS, Lajos, dr.; ANTAL, Albert, dr.; HETYEI, Pal, dr.

Our experiences with Abothyl in the treatment of cervical erosion.
Orv. hetil. 105 no.32:1512-1513 9 Ag '64.

1. Szegedi mj. Varosi Tanacs Korhaza, Szuleszeti es
Nogyogyaszati Onztaly.

BODIS, Sylvia

A noble competition and its winners. Hung TU no. 89:18-19 Ag-S '62.

BONISKO, P.P.

Scientific and technical conference on over-all mechanization and
automatization in coal mines and ore dressing plants. Ugol'
33 no.3:44-45 Mr '58. (MIRA 11:3)
(Coal mining machinery) (Automatic control)

BODISKO, V.P.

Molotov State Medical Inst.

BODISKO, V.P.: "The characteristics of icterohemorrhagic leptospirosis." Molotov State Medical Inst. Moscow, 1956.

(Dissertation for the Degree of Candidate in Biological Sciences)

SO: Knizhnaya Letopis', No. 20, 1956

DEMINA, A.A.; BODISKO, V.P.; ARKHANGEL'SKAYA, K.N.; LARINA, L.I.

Bacteriological diagnosis of pertussis under conditions of mass specific vaccination. Zhur. mikrobiol., epid. i immun. 40 no.9: 26-30 S'63. (MIRA 17:5)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni Mechnikova i Detskoy gorodskoy bol'nitsy Baumanskogo rayona Moskvyy No.32.

BODIU, Anatolia Pavel; ZEMAN, Vladimir.

Problem of dressing gold ores from an oxidation zone.
Rudy 11 no.11; 377-380 N'63.

1. Vysoka skola banska, Ostrava (for Bodiu).
2. Rudne bane, n.p., Kremnica (for Zeman).

BODIU, Anatolie Pavel

Reducing ore grinding costs in Rumania. Rudy 10 no.9:332-333 S '62.

1. Katedra upravnictva HGF.

11214-66 EWP(c)/EWP(b) LJP(c) JD/JG

ACC NR: AP6004956

SOURCE CODE: RU/0027/65/010/001/0105/0123

AUTHOR: Bodiu, Anatolie Pavel (Candidate of technical sciences)

ORG: Mining Trust, Baia Mare (Trustul minier)

TITLE: Influence of the pH on the kinetics of the dissolution of gold in cyanide solutions 22
B

SOURCE: Studii si cercetari de metalurgie, v. 10, no. 1, 1965, 105-123

TOPIC TAGS: oxidation reduction reaction, gold, cyanide, acid base equilibrium

ABSTRACT: Studies on the reduction-oxidation nature of the Bodlaender reaction showed that the dissolving of gold in cyanide solutions involves the metal, the cyanide ions and active oxygen as electron acceptor. The authors find that the effect of pH on the active cyanide and active oxygen is contradictory: while rising pH has an unfavorable effect on the concentration of active oxygen, it has a favorable one on the concentration of active cyanide. Thus, the determination of optimal values of these two factors presupposes that one also determines an optimal value of the pH of the medium. Orig. art. has: 6 figures, 21 formulas, and 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 07Dec64 / ORIG REF: 002 / OTH REF: 010

SOV REF: 015

Card 1/1

BODIYENKO, I. I.

PA 24T44

USSR/Engineering

Explosives, Underground

Mines and Mining - Equipment

Sep 1947

"Mechanical Equipment in Shafts as a Source of Explosions," I. I. Bodiynko, $\frac{1}{2}$ p

"Ugol'" No 9 (258)

Author states that there are many parts of mine machinery which may generate sparks and cause explosions. He suggests basic steps to protect present equipment and recommends that factories producing new equipment take into account this possibility and find ways of minimizing the danger. He recommends that revolving and bearing surfaces be protected in some manner from the air, and that factories should develop efficient methods for lubrication of moving parts of machinery.

24T44

BODIYENKO, I. I.

~~BODIYENKO, I. I.~~; ZAVOZIN, L.F., redaktor; ASTAKHOV, A.V., redaktor;
IL'INSKAYA, G.M., tekhnicheskii redaktor

[Reference booklet for operators of mine pumping installations]
Pamiatka dlia mashinista shakhtnoi vodootlivnoi ustanovki. Moskva,
Ugletekhizdat, 1954. 53 p. (MIRA 8:4)
(Mine pumps)

BANHALMI, Jozsef; BODIZS, Denes

The 300 keV Van de Graaff type electron accelerator for teaching purposes. ATOMKI kozl 4 no.3/4:191-195 D '62.

1. Kossuth Lajos Tudományegyetem Kísérleti Fizikai Intézete, Debrecen (for Banhalmi). 2. Optikai és Finommechanikai Központi Kutató Laboratorium, Debrecen (for Bodizs).

SZOLLOSY, Ervin, dr.; BODIZS, Katalin, dr.; DUDAS, Bela, dr.; VOROS, Maria, dr.

Data on the diagnostic evaluation of rhesus hemagglutination in epidemic hepatitis. Orv. hetil. 103 no.49:2312-2315 9 D '62.

1. Szeged Varosi Kozegeszsegugyi Jarvanyugyi Allomas es Szeged Varosi Tanacs Korhaza, Fertozo Cszaly.
(HEMAGGLUTINATION) (HEPATITIS, INFECTIOUS)

HUNGARY

SZOLLOSY, Ervin MD; BODIZS, Katalin MD; DUDAS, Bela MD; and VOROS, Maria MD, of the Szeged Municipal Public-Health- and Epidemiological Station (Szeged Varosi Kosegessegugyi Jarvanyugyi Allomas) and the Department of Infectious Diseases (Fertozo Osztaly) of the Hospital of the Szeged Municipal Council (Szeged Varosi Tanacs Kertaze).

"Data Regarding the Diagnostic Evaluation of Rheus Hemagglutination in Cases of Epidemic Hepatitis"

Budapest, Orvosi Hetilap, Vol 103, No 49, 9 Dec 62; pp 2312-2315.

Abstract: [Authors' Hungarian summary] The sera of patients with epidemic hepatitis exhibited positive agglutinational values in more or less the same proportion as described in the literature. In one part of the cases 1:10 fecal extracts also gave positive hemagglutinational values. The hemagglutinational property of the fecal extract is very labile; it ceases on freezing and thawing, and on storing in the refrigerator. Authors recommend the use of the hemagglutinational method as a supplementary test in the laboratory diagnosis of epidemic hepatitis on account of the rapidity with which it may be carried out. [9 references, mainly Western].

Y/001/60/000/005/001/002
D257/D304

AUTHOR: Bodlaj, Viktor, Engineer

TITLE: Use of feeders in transporting energy from HF heating generators to applied loads

PERIODICAL: Tehnika, no. 5, 1960, 957-964

TEXT: The author attempts here to (1) solve the problem of simplicity and economy in heating-energy transmission; (2) use standing waves for heating large dielectric surfaces. Specifically, distant transmission, demanded in industry, is considered. Treatment is in three parts: (i) feeders closed by adaptable loads, working loads; (ii) resonant feeders closed by working loads; (iii) feeders closed by working load lines. Generally, loads in generator feeders and elements are to match which means closing by characteristic resistance and then fitting the generator (with nominal power P_R) to feeder. Resistance differences in generators and feeders are usually large, which therefore need transformation for matching. Here the resonant resistance of the loaded oscillator must equal the characteristic feeder resistance, and neglecting

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Use of feeders...

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coil losses, the main source of resistance is the coil, or capacitor load. In dielectric heating (to which this circuit mainly applies), resistance of working-load capacitor (R_b) is Eq. (1)

$$R_b = \frac{1}{\omega C_b \lg \delta}$$

where δ - angle of dielectric loss; C_b - working load

capacity; ω - frequency. This case is of little practical use, since characteristic impedance rarely equals resonance resistance. More useful transformation is shown in detail in Fig. 5, where the load oscillator matches the load potential, and C_b is too low for resonance. The further five cases (Fig. 6a - e) are for different potentials of C_b .

different load potentials and different values of elements. Fig. 6 e is suitable when the need for large coupling (k), is absent. C_b is small, and L_o tunes to resonance. The load-matching to the feeder is further complicated by the load varying with material for heating and temperature, (i.e. change of dielectric constant ϵ_r and δ with temperature), so tuning and matching need to be as simple as possible. Feeder-borne impedance

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Use of feeders...

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is obtained from the potentials or primary and secondary inductances.
so

$$U_{12} = -j\omega M J_1 = J_2 \cdot Z_2$$

(7) ✓

where gdc jc

$$Z_2 = R_2 + j\omega L_2 + \frac{1}{j\omega C_2} = R_2 [1 + (1 - \omega^2 L_2 C_2)] \quad (8) \checkmark$$

$$1 - \omega^2 L_2 C_2 = \beta \quad (\text{faktor razdešavanja})$$

where β is the disharmonizing factor.

Hence

Tuning the secondary circuit so that β equals zero,

$$Z_1 = \frac{U_1}{J_1} = r_1 + j\omega L_1 + \frac{j\omega^2 M^2 C_2}{j\omega C_2 R_2 + \beta} \quad (12)$$

$$6 C_2^4 L_1 R_2^3 = 0 \quad (23)$$

is obtained which is without meaning, since no term in LHS is zero, showing that the feeder could be closed by $Z_1 = R_k + jX$, which would

cause fluctuations of potential and current on it. Compensation X is obtained by disharmonizing the secondary circuit so that, for example, it gives capacitive effect to the $-jX$ value. The disadvantage of this is a consequent fall in U_2 (and so in J_2). So for constant transformation,

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Use of feeders...

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M has to increase. It is advantageous only when the resonance potentials on the load are too high. However, it is difficult to get a circuit matched permanently to the R_k value, so, occasionally, the secondary load circuit is tuned to the k resonance frequency, and the feeder allowed to bear some inductive resistance, when it adjusts itself, in the resulting fluctuations of current and potential. The resistance that the generator bears then is considered at the end. Colpitts' circuit is chosen for the oscillator (HF generator), in matching the characteristic feeder resistance to the generator resistance. Potential height, and so field strength, on load capacity are important, since the square of the field controls the concentration of power in the heated material. Field must not exceed the 'breakdown' density value and so harm the material.

From (7) and (8)

$$J_2' = -j \frac{\omega M J_1}{R_2 (1 + j Q_b \beta)}$$

$$= -j \frac{\omega k \sqrt{L_1 L_2}}{R_2} J_1 \frac{1}{1 + j Q_b \beta}$$

is obtained:

J_1 equals J_2' ,

since the ends of the feeder

are matched. If the load circuit is used. for inductive heating, the

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Use of feeders...

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interest is in J_2 , given by (48). For smaller distances, feeders, whose capacity adds to the capacity of load circuit, are used (feeder length $< \frac{\lambda}{4}$). Fig. 12 illustrates the case of such transport used, first of

all, for inductive heating, and known as the resonant cable transport of HF power. Again, Colpitts circuit is used, as a model, for calculations.

Equations $(1 - \omega^2 L_2 C_2)(1 - \omega^2 C_1 L_1) - \omega^2 C_2 L_1 = 0$

(54) must be satisfied. The series circuit in L_2, C_2

$$R_{eq} = \frac{R_1^2 + \omega^2 L_1^2}{R_1} = \frac{\omega^2 L_1^2}{R_1}$$

(55) gives the branch point which must be inductive when the resonance con-

ditions are satisfied. These two components are chosen such that they give negative value to, i.e. $\frac{U_R}{U_S} = A = 1 - \omega^2 L_2 C_2$, (A being a negative number), and

is obtained.

$$\omega^2 = \frac{C_1 + C_2}{L_1(C_1 C_2)} = \frac{1}{L_1(C_1 + \frac{C_2}{\lambda})} \quad (57)$$

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Use of feeders...

In both ordinary and transformed Colpitts' oscillators, the valve must bear the same resistance, so is given.

Any feeder has some limiting value for useful, and parasitic power, which cannot be exceeded. Transport of HF power using resonant feeders is unsuitable, since the resonant potentials and currents so set up, require manifold adjustments on the feeder. Also, feeder length is limited, as otherwise, at some length, the feeder may amount to total capacity of the oscillator. However, disposal of matching and tuning elements, here, means lower cost and simplicity. Large dielectric surfaces are better heated by standing waves. The physical length of the line is lowered with wavelength, due to the dielectric. The generator bears the resistance according to

$$R_{eq} = \frac{L_1'}{CR_1} \cdot \frac{C_0}{C_0 + C} = \frac{\omega^2 L_1'^2}{R_1} \quad (58)$$

$$Z_1 = R_k \frac{Z_b \cos \beta l + j R_k \sin \beta l}{R_k \cos \beta l + j Z_b \sin \beta l}$$

(79) If it is placed in potential max. or min., the resistance it bears is real. (At max. $R_2 \sqrt{R_k}$, and

at min. $R_1 < R_k$, so somewhere between R_1 and R_2 , impedance with the real

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